

# Paved Trail Repair Weston Bend State Park Weston, Missouri

CLARK &  
ENERSEN

OWNER:

STATE OF MISSOURI  
MICHAEL L. PARSON,  
GOVERNOR

DEPARTMENT OF  
NATURAL RESOURCES  
STATE PARKS

PROJECT  
MANAGEMENT:

OFFICE OF ADMINISTRATION  
DIVISION OF FACILITIES MANAGEMENT,  
DESIGN AND CONSTRUCTION



—BEE CREEK SHELTER

—PROJECT LOCATION

DESIGNER:

Clark & Enersen

PROJECT NUMBER:

X2117-01

SITE NUMBER:  
ASSET NUMBER:

5118  
7815118012

SHEET NUMBER:

**G-000**

09/16/2022  
SHEET 1 OF 6

REFERENCE SYMBOLS

1 SIM
DETAIL OR SECTION NUMBER SHEET ON WHICH IT IS FOUND
1 VIEW NAME
SCALE: 1/8" = 1'-0"
CLASSROOM 101
101
0
FIN. FLR. 100'-0"
WALL TYPE REFERENCE
DEMOLITION INDICATOR
REVISION TAG INFORMATION:
TOP indicates the instrument type.
A = Addendum
B = Bid Package
D = Construction Change Directive or Change Directive
F = Field Order
G = Guaranteed Maximum Price
I = Architects Supplemental Instructions or Architects Supplemental
L = Information
P = Limited Permit
R = Proposal Request, Proposal Request Order or Change Proposal Request
BOT = Request For Information Number assigned to instrument type

STANDARD ABBREVIATIONS

Table with 3 columns: Abbreviation, Full Name, Abbreviation, Full Name. Includes terms like ARCHITECT/ENGINEER, CONTRACTOR, GUARD RAIL, MEETING, SUB-FLOOR LEVELING SYSTEM, etc.

SHEET INDEX

GENERAL
G-000 Title Sheet
G-001 Sheet Index and General Information

CIVIL
C-101 Existing Conditions and Demolition Plan
C-201 Site Plan
C-301 Grading Plan
C-601 Site Details



CLARK &
ENERSEN

2020 Baltimore Ave.
Suite 300
Kansas City, MO 64108
p. 816-474-8237

OFFICE OF
ADMINISTRATION
DIVISION OF FACILITIES,
MANAGEMENT, DESIGN
AND CONSTRUCTION

DEPARTMENT OF
NATURAL RESOURCES
STATE PARKS

PAVED TRAIL REPAIR
DESIGN & PHASE I
CONSTRUCTION
WESTON BEND STATE PARK
16600 HIGHWAY 45 NORTH
WESTON, MO 64098

PROJECT # X2117-01
SITE # 5118
ASSET # 7815118012

REVISION:
DATE:
REVISION:
DATE:
REVISION:
DATE:
REVISION:
DATE:

ISSUE DATE: 09/16/2022

DRAWN BY:
CHECKED BY:
DESIGNED BY:

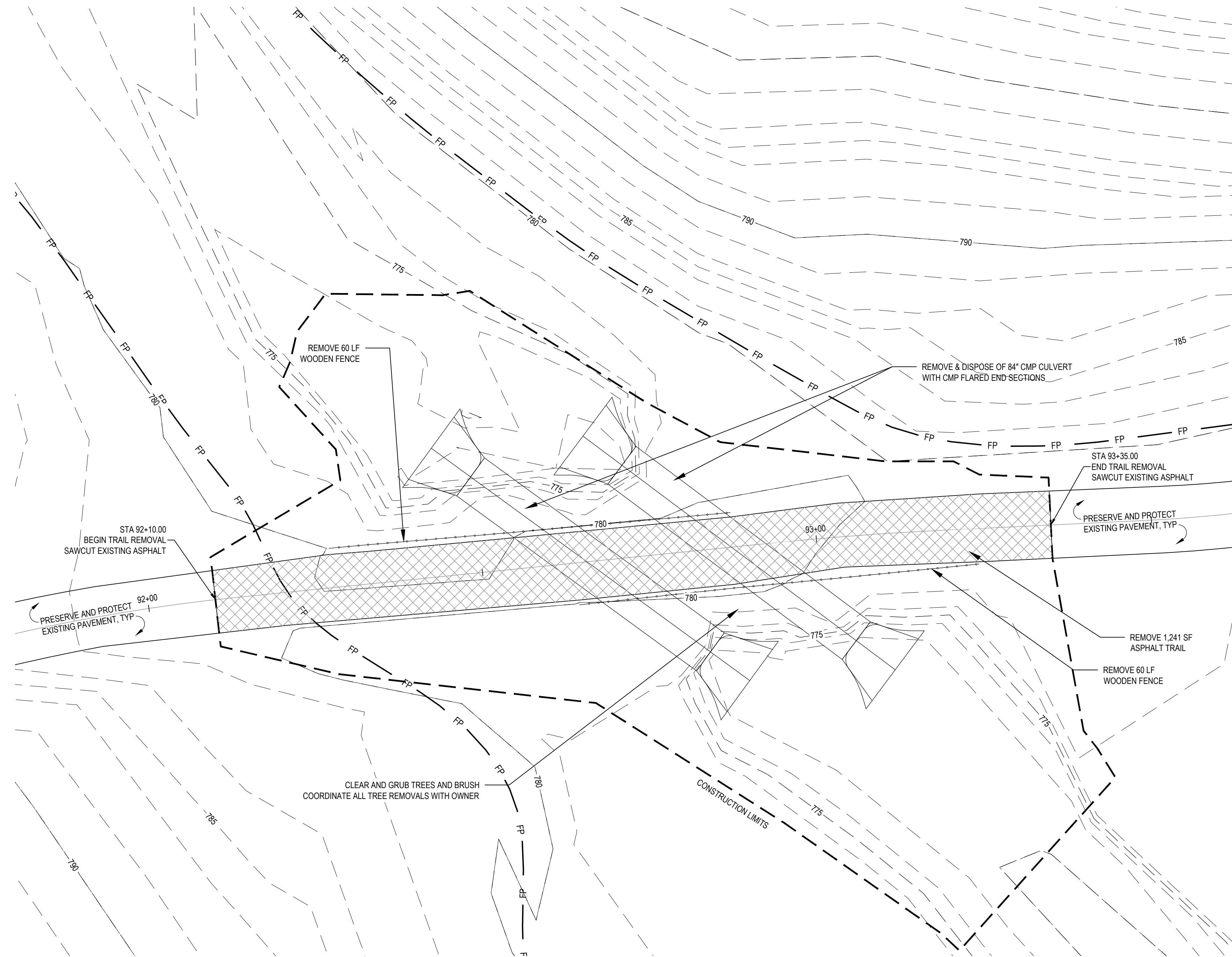
SHEET TITLE:
Sheet Index and General
Information

SHEET NUMBER:

G-001

**GENERAL NOTES:**

1. ALL SHOWN UTILITY INFORMATION IS APPROXIMATE, AND SHALL BE VERIFIED BY CONTRACTOR PRIOR TO COMMENCEMENT OF WORK. CALL THE MISSOURI ONE CALL SYSTEM AT 811.
2. THE CONTRACTOR SHALL VERIFY ALL EXISTING SITE CONDITIONS SHOWN ON PLAN. THE ENGINEER AND OWNER SHALL BE NOTIFIED OF ANY DISCREPANCIES PRIOR TO COMMENCEMENT OF WORK.
3. LOCATE CONSTRUCTION FENCE AS REQUIRED TO SECURE CONSTRUCTION SITE. FENCING MAY EXTEND BEYOND CONSTRUCTION LIMITS AS REQUIRED.
4. THE BEE CREEK SHELTER MAY HAVE EVENTS DURING THE CONSTRUCTION PERIOD FROM APRIL 15 TO NOVEMBER 1. CONTRACTOR SHALL COORDINATE EQUIPMENT AND MATERIAL DELIVERIES AND STORAGE AROUND SCHEDULED EVENTS AND SHALL NOT DAMAGE OR DISRUPT USE OF THE BUILDINGS, PAVEMENT, UTILITIES, AND TURF AREAS SURROUNDING AND/OR LEADING TO THE SHELTER.
5. CONTRACTOR WILL NOT PERFORM ANY WORK IN ENVIRONMENTALLY/CULTURALLY SENSITIVE AREAS NOTED ON THE LOCATION MAP WITHOUT PRIOR APPROVAL OF THE OWNER.
6. PROTECT ALL TREES NOT TO BE REMOVED. ALL TREE REMOVALS TO BE COORDINATED WITH OWNER. TREE REMOVALS SHALL BE COMPLETED PRIOR TO MARCH 31. CLEARING AND GRUBBING EXTENTS TO BE WITHIN CONSTRUCTION LIMITS AND MORE PRECISELY DETERMINED DURING FIELD VISIT TO COORDINATE WITH OWNER.
7. OWNER SHALL BE IMMEDIATELY NOTIFIED OF ANY ARCHEOLOGICAL DISCOVERIES MADE DURING CONSTRUCTION AND WORK MUST BE HALTED IN THAT AREA UNTIL GRANTED PERMISSION TO PROCEED BY OWNER.



**EXISTING CONDITIONS AND DEMOLITION PLAN**  
SCALE: 1"=10'



**LOCATION MAP**  
SCALE: 1"=400'

STATE OF MISSOURI  
MICHAEL L. PARSON,  
GOVERNOR



**CLARK & ENERSEN**

2020 Baltimore Ave.  
Suite 300  
Kansas City, MO 64108  
p. 816-474-8237

OFFICE OF  
ADMINISTRATION  
DIVISION OF FACILITIES,  
MANAGEMENT, DESIGN  
AND CONSTRUCTION

DEPARTMENT OF  
NATURAL RESOURCES  
STATE PARKS

PAVED TRAIL REPAIR  
DESIGN & PHASE 1  
CONSTRUCTION  
  
WESTON BEND STATE PARK  
16600 HIGHWAY 45 NORTH  
WESTON, MO 64098

PROJECT # X2117-01  
SITE # 5118  
ASSET # 7815118012

REVISION: \_\_\_\_\_  
DATE: \_\_\_\_\_  
REVISION: \_\_\_\_\_  
DATE: \_\_\_\_\_  
REVISION: \_\_\_\_\_  
DATE: \_\_\_\_\_

ISSUE DATE: 09/16/2022

DRAWN BY: \_\_\_\_\_  
CHECKED BY: \_\_\_\_\_  
DESIGNED BY: \_\_\_\_\_

SHEET TITLE:  
Existing Conditions and  
Demolition Plan

SHEET NUMBER:

**C-101**

CONSTRUCTION DOCUMENTS  
09/16/2022  
SHEET 3 OF 6



PROFESSIONAL SEAL

**CLARK &  
ENERSEN**

2020 Baltimore Ave.  
Suite 300  
Kansas City, MO 64108  
p. 816-474-8237

OFFICE OF  
ADMINISTRATION  
DIVISION OF FACILITIES,  
MANAGEMENT, DESIGN  
AND CONSTRUCTION

DEPARTMENT OF  
NATURAL RESOURCES  
STATE PARKS

PAVED TRAIL REPAIR  
DESIGN & PHASE 1  
CONSTRUCTION

WESTON BEND STATE PARK  
16600 HIGHWAY 45 NORTH  
WESTON, MO 64098

PROJECT # X2117-01  
SITE # 5118  
ASSET # 7815118012

REVISION: \_\_\_\_\_  
DATE: \_\_\_\_\_  
REVISION: \_\_\_\_\_  
DATE: \_\_\_\_\_  
REVISION: \_\_\_\_\_  
DATE: \_\_\_\_\_

ISSUE DATE: 09/16/2022

DRAWN BY: \_\_\_\_\_  
CHECKED BY: \_\_\_\_\_  
DESIGNED BY: \_\_\_\_\_

SHEET TITLE:  
Site Plan

SHEET NUMBER:

**C-201**

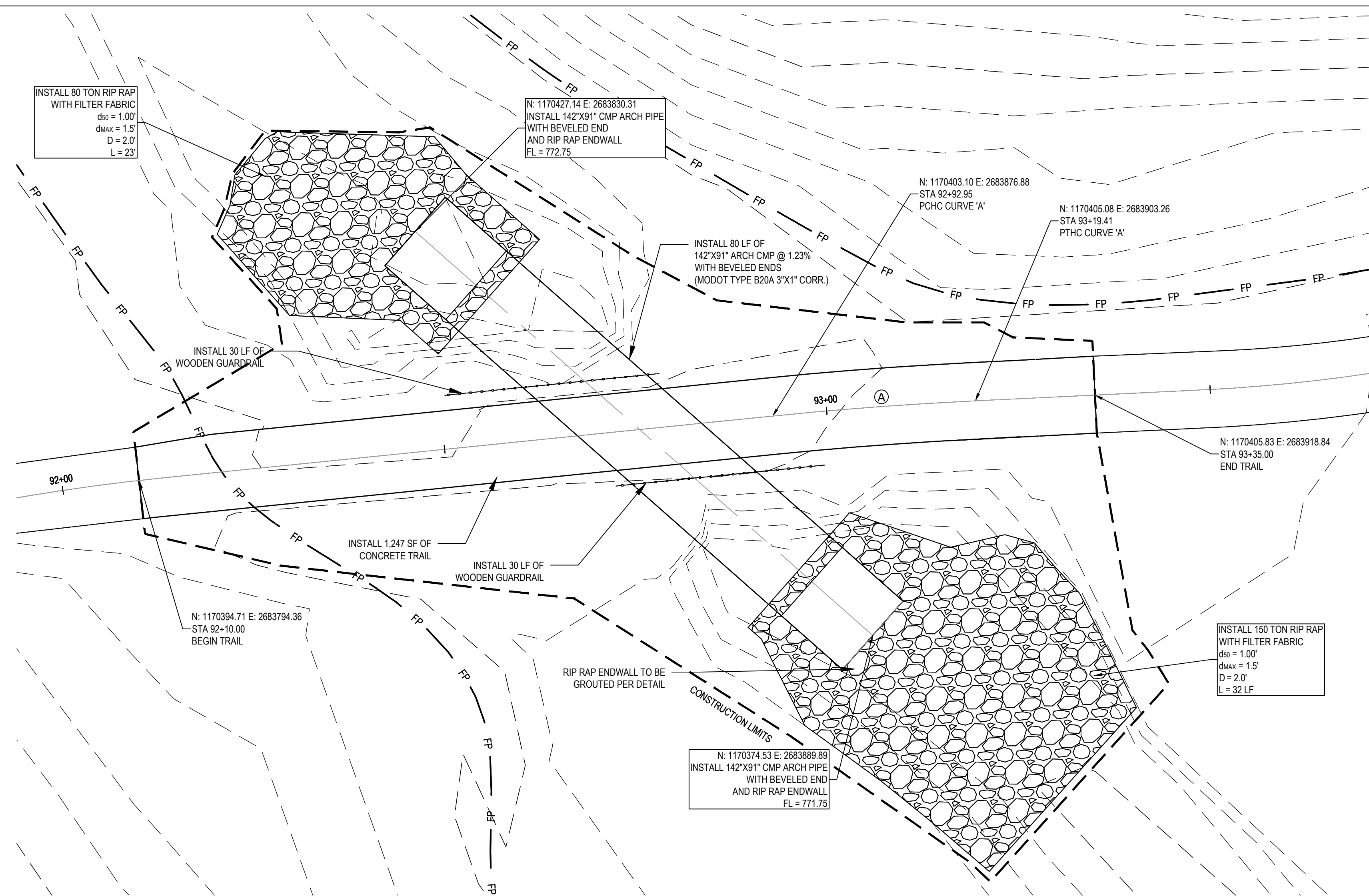
CONSTRUCTION DOCUMENTS  
09/16/2022  
SHEET 4 OF 6

**GENERAL NOTES:**

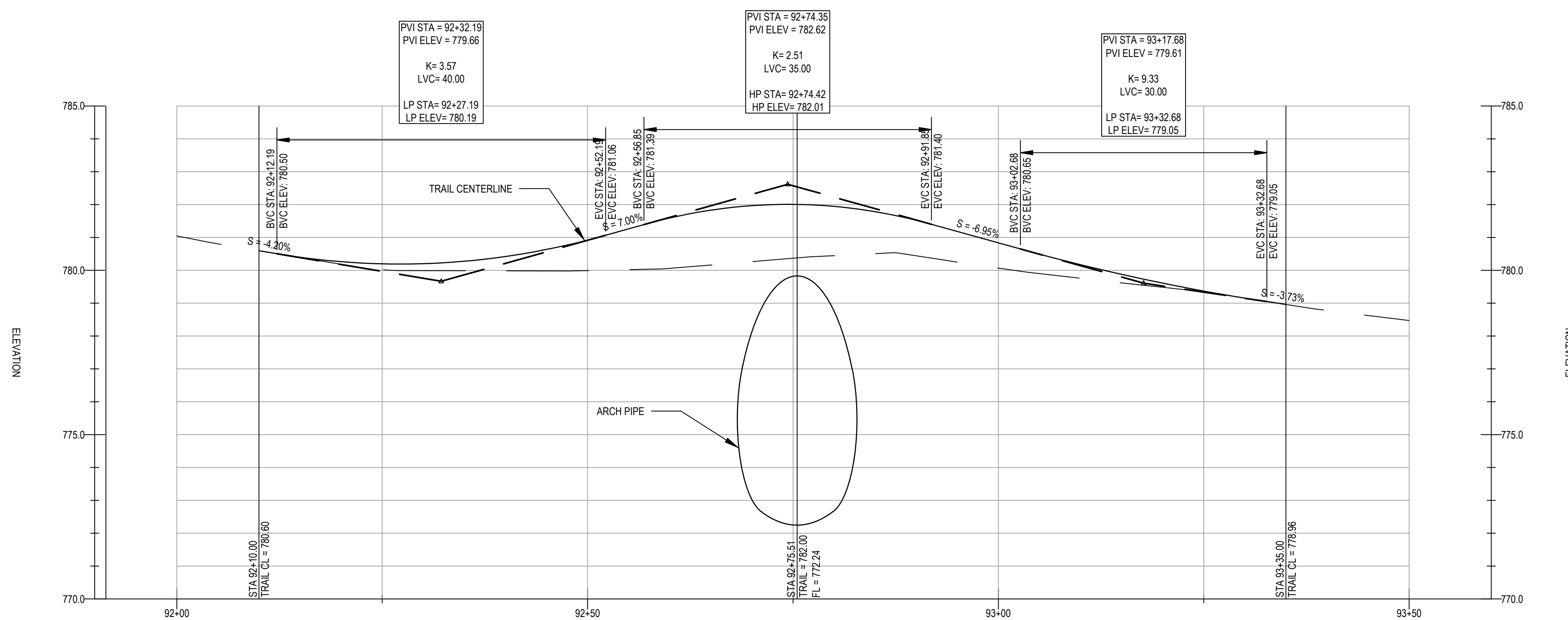
1. ALL SHOWN UTILITY INFORMATION IS APPROXIMATE, AND SHALL BE VERIFIED BY CONTRACTOR PRIOR TO COMMENCEMENT OF WORK. CALL THE MISSOURI ONE CALL SYSTEM AT 811.
2. THE CONTRACTOR SHALL VERIFY ALL EXISTING SITE CONDITIONS SHOWN ON PLAN. THE ENGINEER AND OWNER SHALL BE NOTIFIED OF ANY DISCREPANCIES PRIOR TO COMMENCEMENT OF WORK.
3. REFERENCE GRADING SHEETS FOR SITE PREPARATION AND SWPPP INFORMATION.
4. CULVERT PIPE TO HAVE BEVELED ENDS PER DETAIL. PIPE TO BE INSTALLED PER MODOT DETAIL 725.00C, INCLUDING BUT NOT LIMITED TO BEDDING AND BACKFILL REQUIREMENTS. MINIMUM COVER FOR CONSTRUCTION LOADS MAY ALSO BE REQUIRED AT CONTRACTOR'S EXPENSE IF NECESSARY PER CONTRACTOR'S MEANS AND METHODS.
5. RIP RAP SHALL CONSIST OF DURABLE STONE AND SHALL HAVE A GEOTEXTILE FILTER FABRIC SEPARATING THE RIP RAP FROM THE SOIL INCLUDED IN THE RIP RAP PRICE. THE FABRIC MUST MEET THE REQUIREMENTS OF MODOT SPECIFICATION SECTION 1011 FOR PERMANENT EROSION CONTROL GEOTEXTILE.

**CURVE DATA**

(A)  
R = 500.00  
L = 28.46  
TL = 15.22  
CL = 28.46  
Δα = 0° 01' 58"

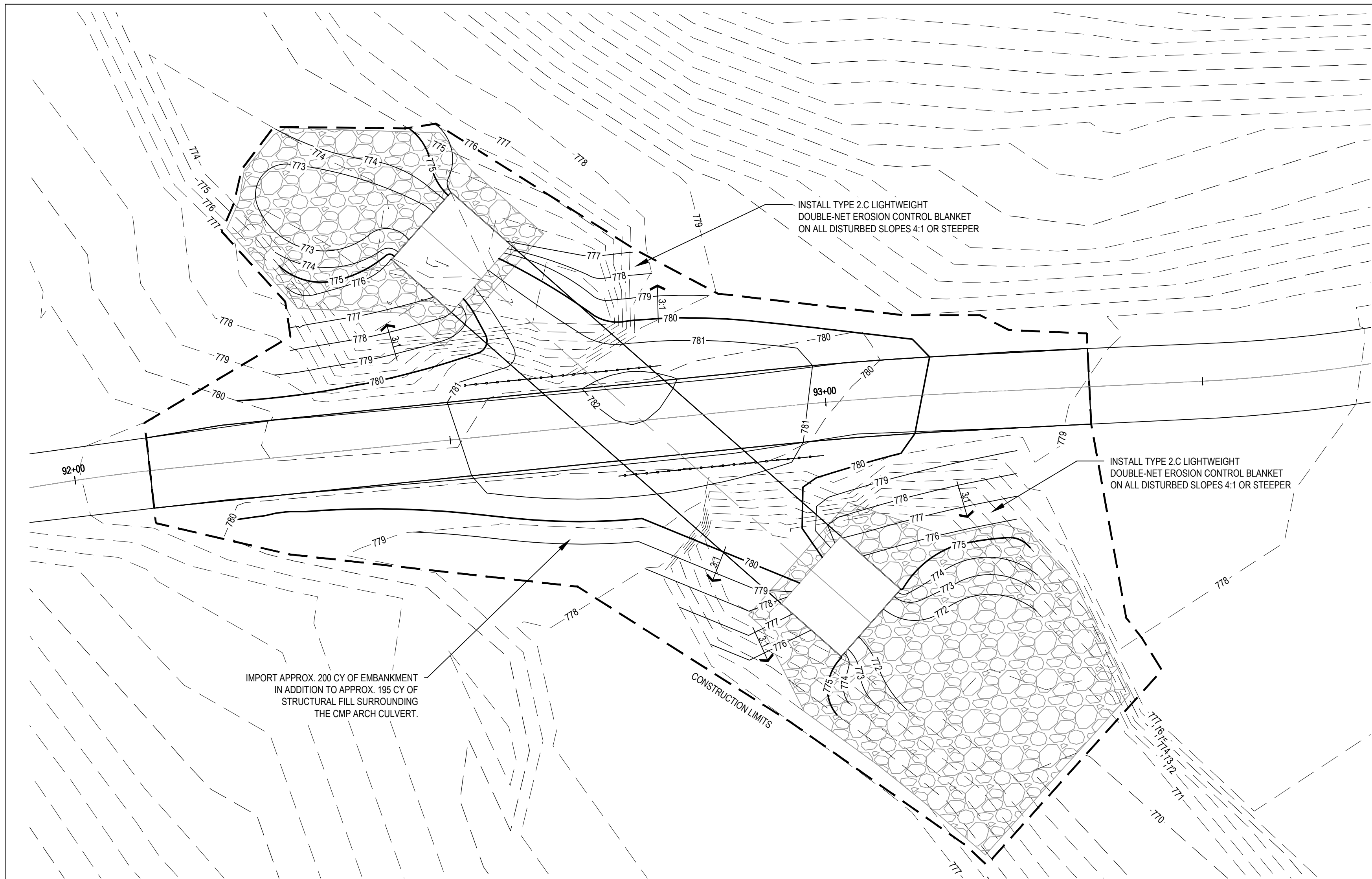


**SITE PLAN**  
SCALE: 1"=10'



**TRAIL PROFILE**

SCALE: 1" = 10' H 1" = 25' V



**GRADING PLAN**  
SCALE: 1"=10'

**GENERAL NOTES**

1. THE GENERAL CONTRACTOR SHALL VERIFY ALL EXISTING SITE CONDITIONS SHOWN ON PLAN. ANY DISCREPANCIES NOTICED IN FIELD SHALL BE RELAYED TO ENGINEER/ OWNER PRIOR TO COMMENCEMENT OF WORK.
2. UNDERGROUND IMPROVEMENTS ARE UNKNOWN. UTILITY LOCATIONS ARE SHOWN IN APPROXIMATE LOCATIONS ONLY. THE CONTRACTOR SHALL PRESERVE AND PROTECT ALL EXISTING UTILITIES UNLESS OTHERWISE NOTED. CONTRACTOR SHALL HAVE ALL UTILITIES LOCATED THROUGH THE STATE "ONE CALL" SYSTEM BEFORE DIGGING.
3. PROVIDE POSITIVE DRAINAGE AT ALL TIMES WITHIN THE CONSTRUCTION AREA. DO NOT ALLOW WATER TO FLOW TO OR POND IN EXCAVATION AREAS.
4. GRADING IS ASSUMED TO REQUIRE ALL FILL (INCLUDING STRUCTURAL FILL, TOPSOIL, AND OTHER FILL) TO BE IMPORTED AND WASTE SOILS TO BE REMOVED FROM THE SITE BY THE CONTRACTOR. TOPSOIL MAY BE STOCKPILED AND RESPREAD ON SITE. STOCKPILES MUST BE PROTECTED TO PREVENT EROSION.
5. THE CONTRACTOR SHALL BE RESPONSIBLE FOR DAMAGE TO EXISTING PAVEMENT AND UTILITIES AND SHALL REPAIR ANY SUCH DAMAGE AT THEIR OWN EXPENSE.
6. TURF RESTORATION SHALL BE PERFORMED AT THE DIRECTION OF PARKS STAFF FOR AREAS OUTSIDE OF RIP RAP.
7. CONTRACTOR SHALL BE RESPONSIBLE FOR EROSION AND SEDIMENT CONTROL MEASURES INCLUDING BUT NOT LIMITED TO TEMPORARY STREAM DIVERSION, CHECK DAMS, AND/OR WATTLES, MULCH BERMS, OR OTHER MEANS AND METHODS.

**LEGEND**

EXISTING CONTOUR LINE	---	778
PROPOSED CONTOUR LINE	- - - -	778
PROPOSED SPOT ELEVATION	⊗	SPT 78.00
PROPOSED SLOPE	←	SLOPE 1%
MATCH EXISTING	ME	
PAVEMENT	PWMT	
TOP OF CURB	TC	
BOTTOM OF CURB	BC	
LOW POINT	LP	
DRAIN INLET	DI	
BREAK POINT	BP	
TOP OF STAIRS	TS	
BOTTOM OF STAIRS	BS	
TOP OF WALL	TW	
BOTTOM OF WALL	BW	

**EROSION CONTROLS PROCEDURES**

1. SEQUENCE OF EROSION CONTROL BMP'S (BEST MANAGEMENT PRACTICES)
  - PRIOR TO GRADING OPERATION, INSTALL ALL STRAW SOCKS AND/OR OTHER APPROVED BMP'S
  - FOLLOWING SOIL DISTURBANCE, DISTURBED AREAS OF THE CONSTRUCTION SITE THAT WILL NOT BE REDISTURBED FOR 21 DAYS MUST BE STABILIZED BY THE 14TH DAY AFTER THE LAST DISTURBANCE, EXCEPT AS PRECLUDED BY SNOW COVER. IN THE EVENT OF SNOW COVER, STABILIZATION MEASURES MUST BE INITIATED AS SOON AS PRACTICABLE THEREAFTER.
  - MINIMIZE ANY TRACKING OF SOIL ONTO AREAS OF PAVEMENT OUTSIDE OF CONSTRUCTION LIMITS
2. THE CONTRACTOR SHALL HAVE A SPILL PREVENTION AND RESPONSE PLAN THAT ADDRESSES FUELING, MAINTENANCE AND STORAGE AREAS ON-SITE INCLUDING A DESCRIPTION OF SAID CONSTRUCTION MATERIALS (WITH UPDATES AS APPROPRIATE). THIS SPILL PREVENTION PLAN SHALL BE MAINTAINED ON THE PROJECT SITE.
3. ANY WASTES PRESENT OR GENERATED AT THE SITE SHALL BE TAKEN TO A PERMITTED SANITARY LANDFILL.
4. TREAT OR DISPOSE OF SANITARY WATERS THAT ARE GENERATED ON-SITE IN ACCORDANCE WITH STATE OF LOCAL REQUIREMENTS.
5. DUST BLOWING CONTROL. THE CONTRACTOR SHALL TAKE APPROPRIATE MEASURES TO CONTROL DUST.
6. THE CONTRACTOR SHALL PERIODICALLY REMOVE ACCUMULATED SEDIMENT FROM BEHIND WATTLES AND/OR STRAW SOCKS DURING THE LIFE OF THIS CONTRACT. ACCUMULATION OF SEDIMENT MUST NOT BE ALLOWED TO REACH ABOVE HALF THE HEIGHT OF THE DEVICE. ALL EROSION CONTROL FEATURES SHALL BE KEPT IN WORKING ORDER DURING THE LIFE OF THIS CONTRACT AT NO ADDITIONAL COST TO THE OWNER.
7. STABILIZATION OF DISTURBED AREAS WILL BE PERFORMED BY THE CONTRACTOR. DISTURBED AREAS AROUND THE BEE CREEK SHELTER AND PARKING AREA WILL BE STABILIZED USING A FESCUE BLEND PER THE SPECIFICATIONS. DISTURBED AREAS AROUND THE TRAIL AND CULVERT WILL BE STABILIZED USING ANNUAL RYE PER THE SPECIFICATIONS.

**INSPECTIONS AND MODIFICATIONS TO THE PLAN**

1. THE SITE SHALL BE INSPECTED TO IDENTIFY MAINTENANCE NEEDS AND/OR SWPPP DEFICIENCIES ONCE EVERY 7 CALENDAR DAYS, AND WITHIN 24 HOURS AFTER A PRECIPITATION EVENT OF 0.5 INCHES OR GREATER. CONTROLS MUST BE IN GOOD OPERATING CONDITION UNTIL THE CONSTRUCTION ACTIVITY IS COMPLETE AND FINAL STABILIZATION HAS BEEN REACHED. ANY CHANGES THAT MAY BE REQUIRED TO CORRECT DEFICIENCIES IN THE SWPPP NOTED DURING AN INSPECTION SHOULD BE MADE AS SOON AS PRACTICAL AFTER AN INSPECTION BUT IN NO CASE LATER THAN 7 DAYS AFTER THE INSPECTION.
2. INSPECTIONS MUST BE CONDUCTED BY QUALIFIED PERSONNEL KNOWLEDGEABLE IN THE PRINCIPLES AND PRACTICE OF EROSION AND SEDIMENT CONTROLS WHO POSSESSES THE SKILLS TO ASSESS CONDITIONS AT THE CONSTRUCTION SITE THAT COULD IMPACT STORM WATER QUALITY AND TO ASSESS THE EFFECTIVENESS OF ANY EROSION AND SEDIMENT CONTROL MEASURES SELECTED TO CONTROL THE QUALITY OF STORM WATER DISCHARGE FROM THE CONSTRUCTION ACTIVITY.
3. THE EROSION CONTROL PLAN SHALL REMAIN DYNAMIC. IF DEFICIENCIES ARISE DURING THE COURSE OF THE PROJECT, THE CONTRACTOR SHALL IMPLEMENT EFFECTIVE CORRECTIVE ACTIONS.
4. A COPY OF THE EROSION CONTROL PLAN MUST BE KEPT AT THE CONSTRUCTION SITE FROM THE TIME CONSTRUCTION BEGINS UNTIL THE SITE HAS REACHED FINAL STABILIZATION.

**GENERAL NOTES**

1. THE CONSTRUCTION MANAGER SHALL VERIFY ALL EXISTING SITE CONDITIONS SHOWN ON PLAN. ANY DISCREPANCIES NOTICED IN FIELD SHALL BE RELAYED TO THE ENGINEER / OWNER PRIOR TO COMMENCEMENT OF WORK.

STATE OF MISSOURI  
MICHAEL L. PARSON,  
GOVERNOR



PROFESSIONAL SEAL

**CLARK & ENERSEN**

2020 Baltimore Ave.  
Suite 300  
Kansas City, MO 64108  
p. 816-474-8237

OFFICE OF  
ADMINISTRATION  
DIVISION OF FACILITIES,  
MANAGEMENT, DESIGN  
AND CONSTRUCTION

DEPARTMENT OF  
NATURAL RESOURCES  
STATE PARKS

PAVED TRAIL REPAIR  
DESIGN & PHASE 1  
CONSTRUCTION

WESTON BEND STATE PARK  
16600 HIGHWAY 45 NORTH  
WESTON, MO 64098

PROJECT # X2117-01  
SITE # 5118  
ASSET # 7815118012

REVISION: \_\_\_\_\_  
DATE: \_\_\_\_\_  
REVISION: \_\_\_\_\_  
DATE: \_\_\_\_\_  
REVISION: \_\_\_\_\_  
DATE: \_\_\_\_\_

ISSUE DATE: 09/16/2022

DRAWN BY: \_\_\_\_\_  
CHECKED BY: \_\_\_\_\_  
DESIGNED BY: \_\_\_\_\_

SHEET TITLE:  
Grading Plan

SHEET NUMBER:

**C-301**

CONSTRUCTION DOCUMENTS  
09/16/2022  
SHEET 5 OF 6



PROFESSIONAL SEAL

# CLARK & ENERSEN

2020 Baltimore Ave.  
Suite 300  
Kansas City, MO 64108  
p. 816-474-8237

OFFICE OF  
ADMINISTRATION  
DIVISION OF FACILITIES,  
MANAGEMENT, DESIGN  
AND CONSTRUCTION

DEPARTMENT OF  
NATURAL RESOURCES  
STATE PARKS

PAVED TRAIL REPAIR  
DESIGN & PHASE I  
CONSTRUCTION

WESTON BEND STATE PARK  
16600 HIGHWAY 45 NORTH  
WESTON, MO 64098

PROJECT # X2117-01  
SITE # 5118  
ASSET # 7815118012

REVISION: \_\_\_\_\_  
DATE: \_\_\_\_\_  
REVISION: \_\_\_\_\_  
DATE: \_\_\_\_\_  
REVISION: \_\_\_\_\_  
DATE: \_\_\_\_\_

ISSUE DATE: 09/16/2022

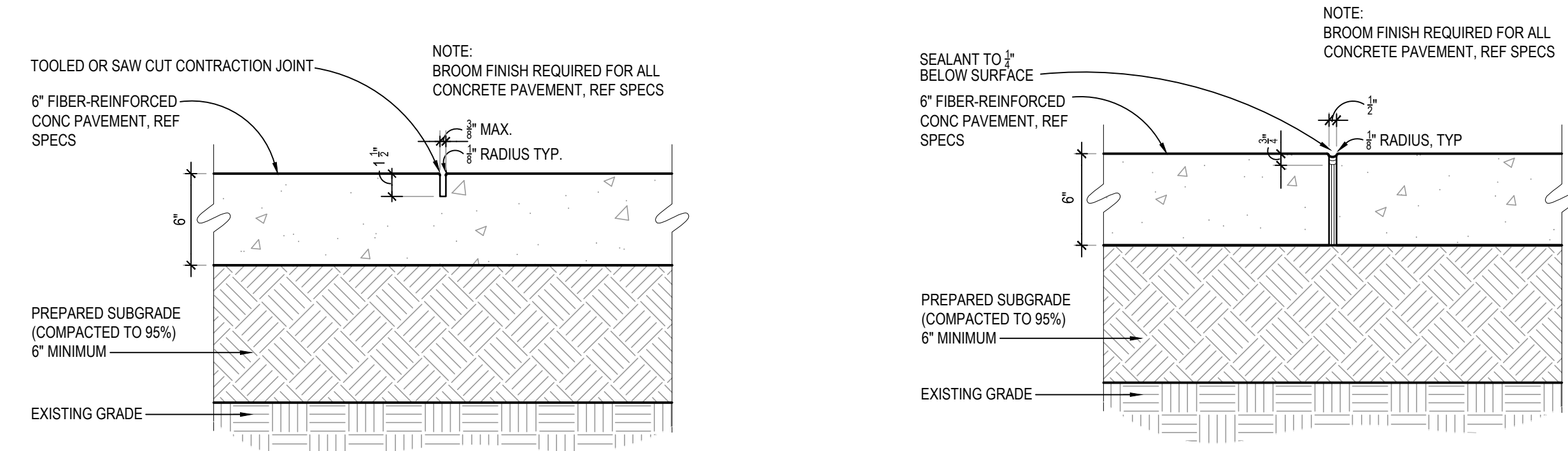
DRAWN BY: \_\_\_\_\_  
CHECKED BY: \_\_\_\_\_  
DESIGNED BY: \_\_\_\_\_

SHEET TITLE:  
Site Details

SHEET NUMBER:

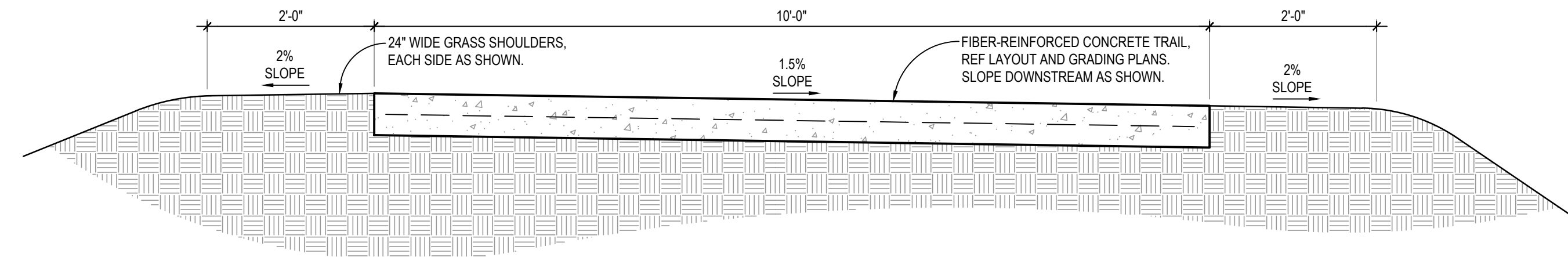
## C-601

CONSTRUCTION DOCUMENTS  
09/16/2022  
SHEET 6 OF 6

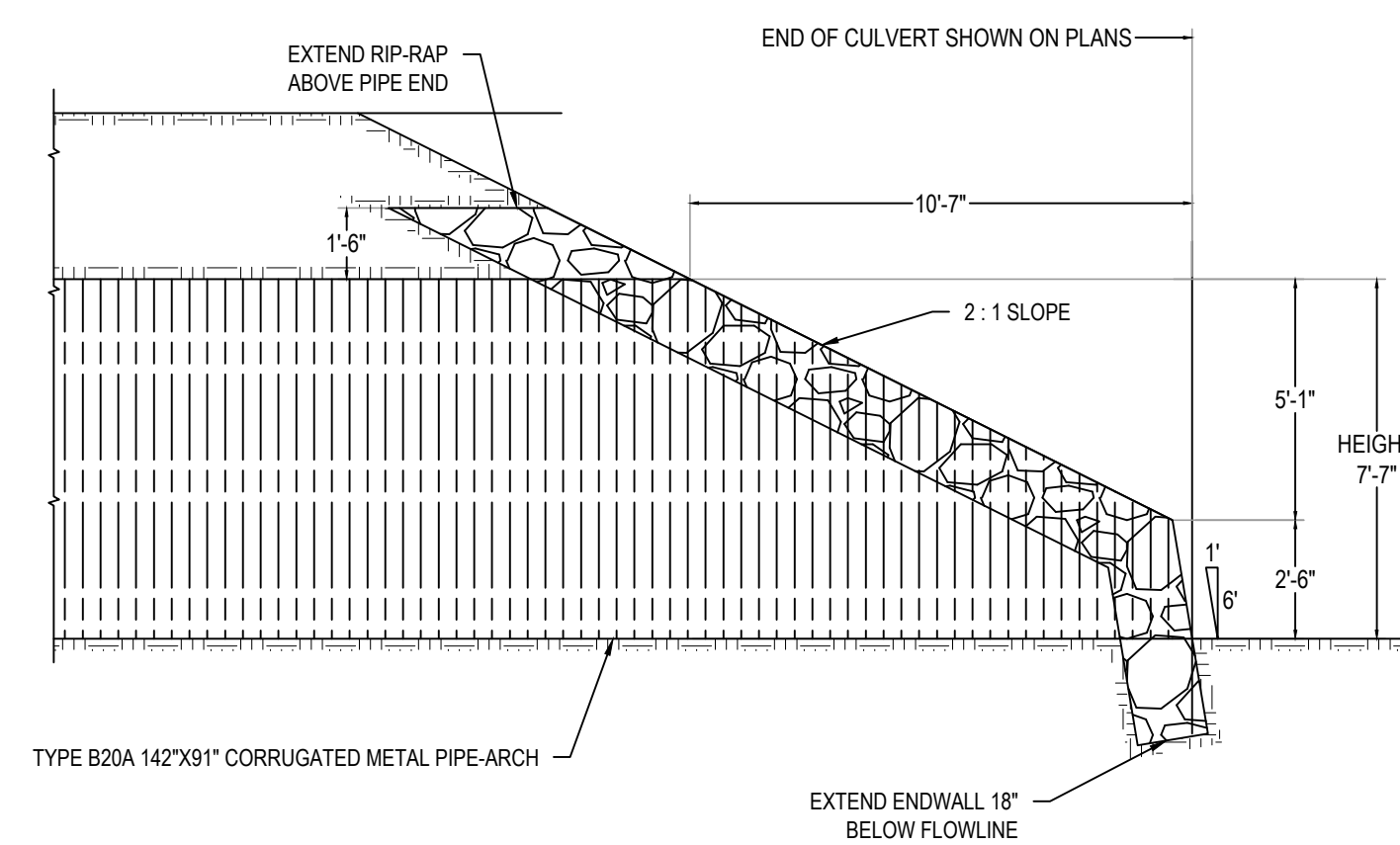


**1** CONCRETE CONTRACTION JOINT  
SCALE: 1 1/2"=1'-0"

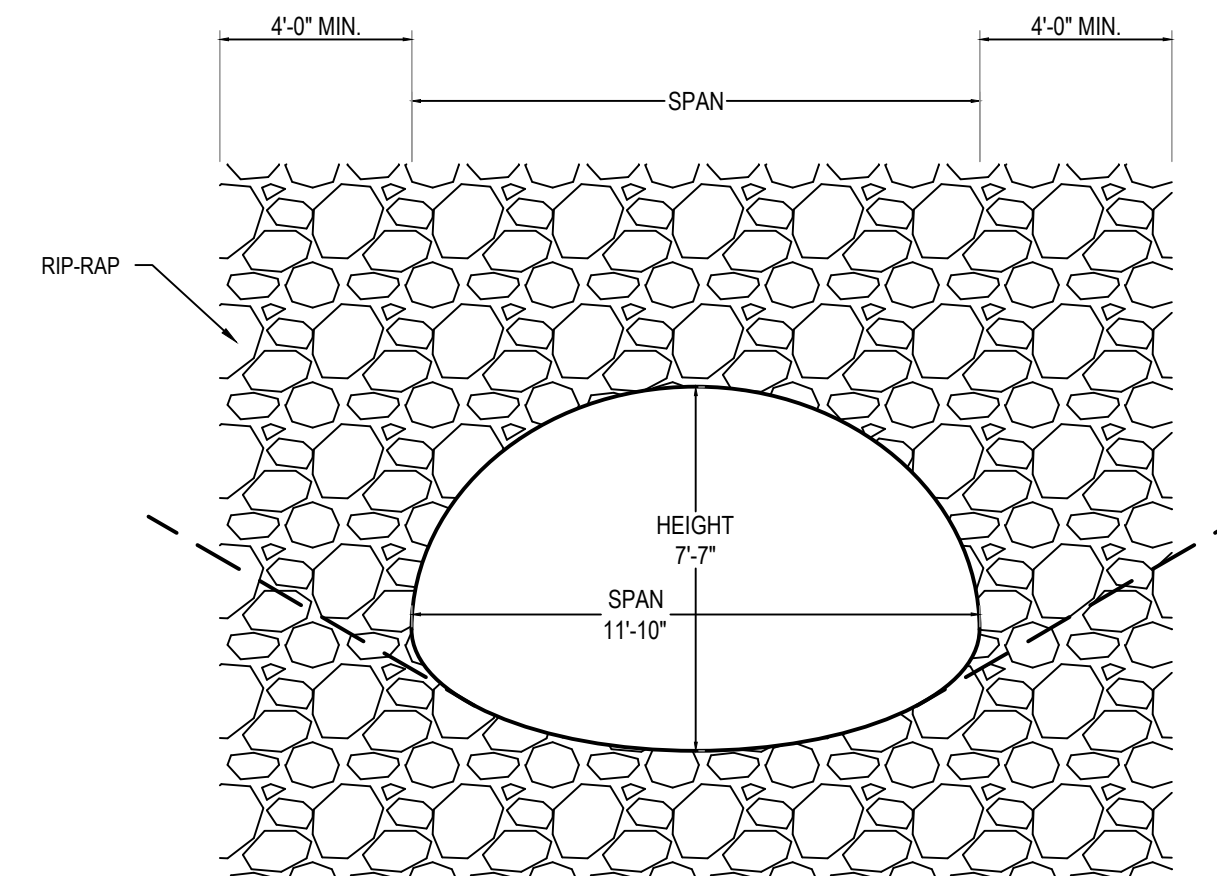
**2** CONCRETE EXPANSION JOINT  
SCALE: 1 1/2"=1'-0"  
(LOCATED AT 50' INTERVALS, TYP)



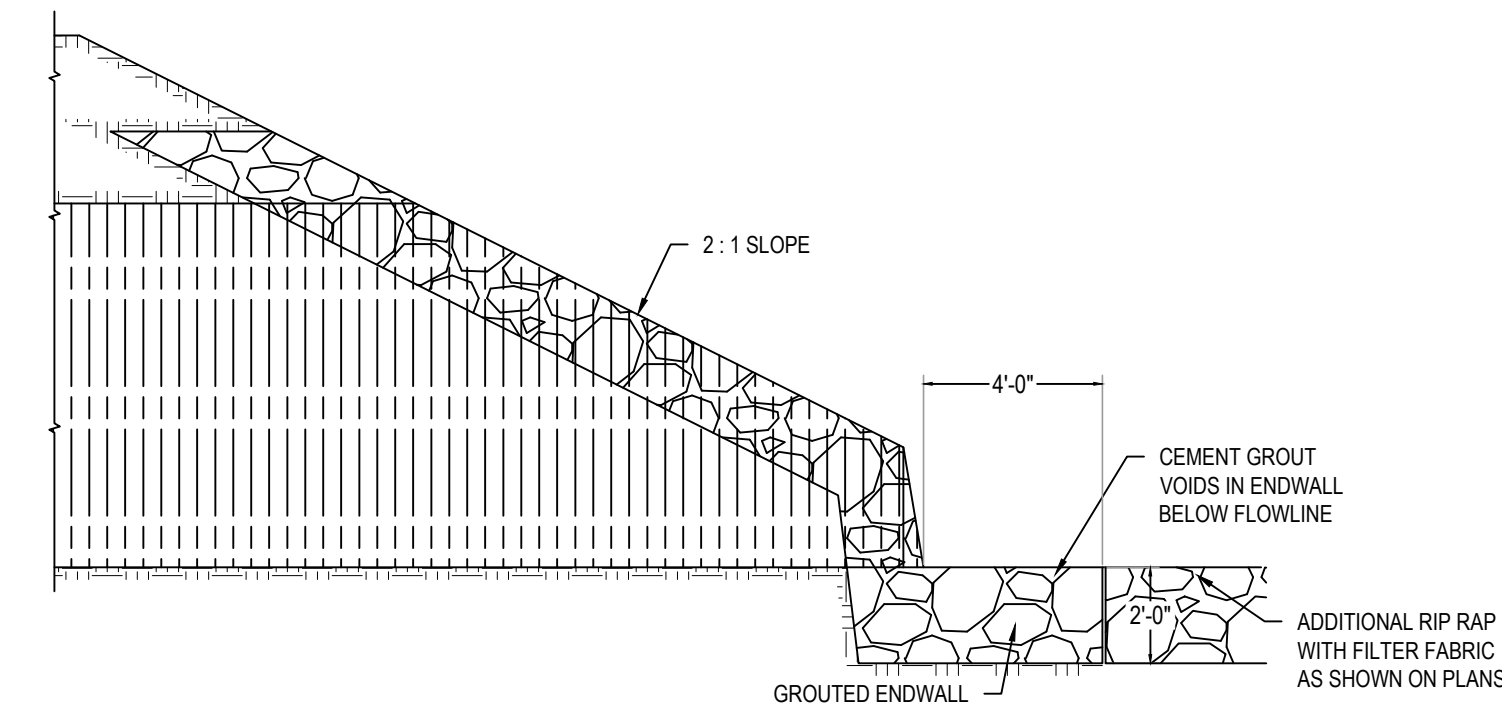
**3** TYPICAL TRAIL CROSS-SECTION  
SCALE: 3/4"=1'-0"



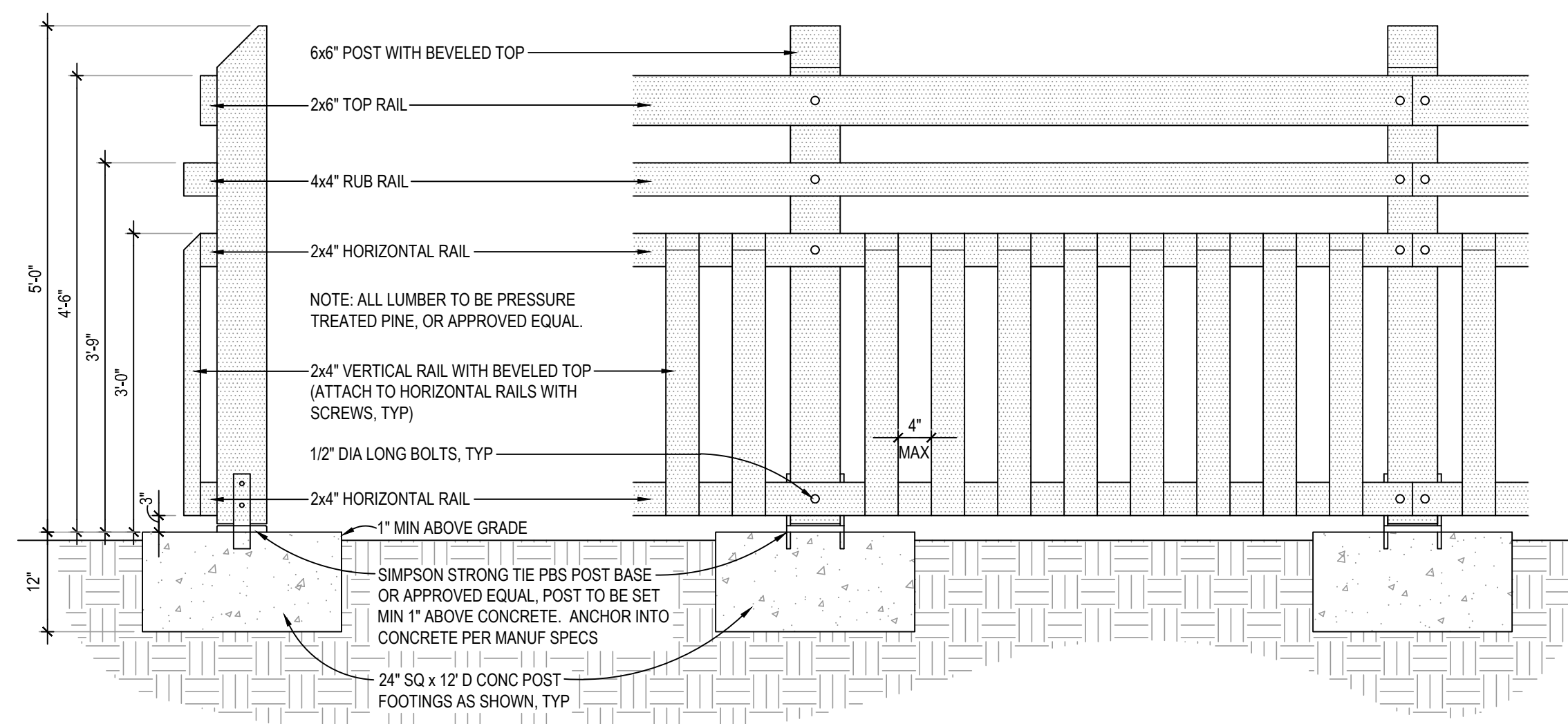
**4** BEVELED END PIPE-ARCH SECTION ON CENTERLINE  
SCALE: 3"=1'-0"



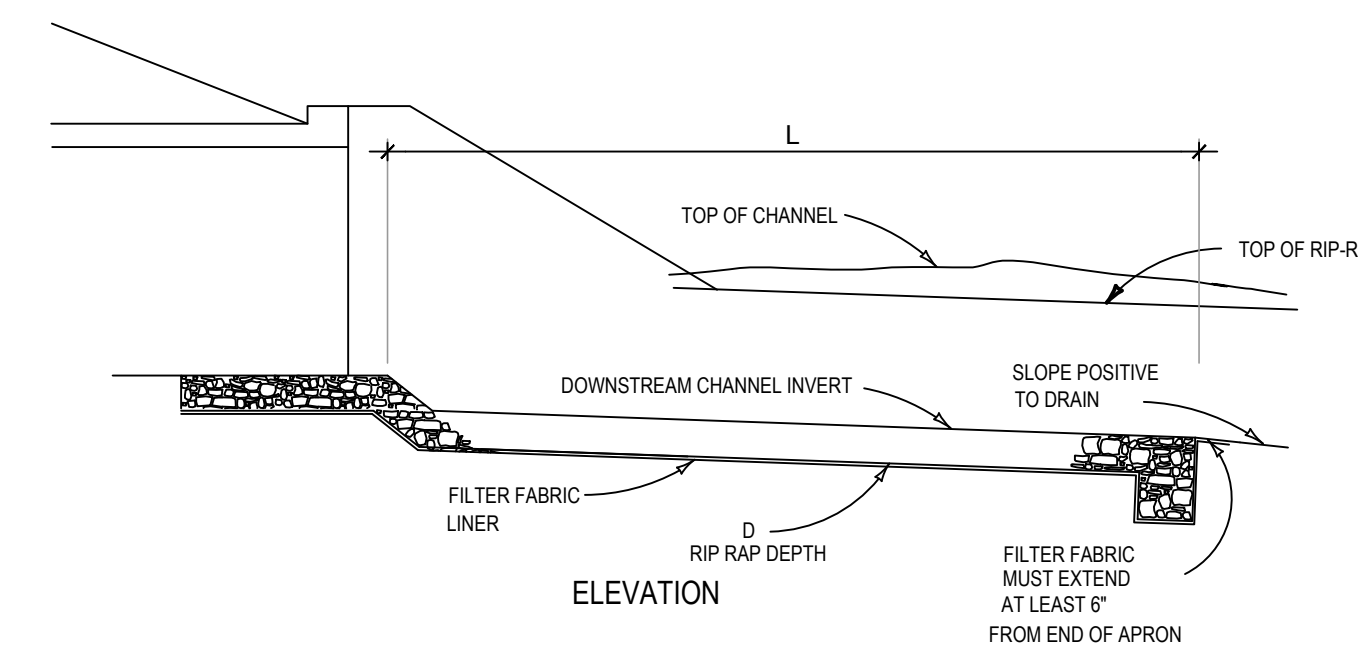
**5** BEVELED END PIPE-ARCH ELEVATION  
SCALE: 3"=1'-0"



**6** APRON FOR OUTLET END OF PIPE-ARCH  
SCALE: 3"=1'-0"



**7** WOODEN GUARDRAIL  
SCALE: 3/4"=1'-0"



**8** RIP-RAP PLACEMENT  
SCALE: NTS